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Correio, Vanessa de Souza; Correio, Elaine Antunes Cortez; Correio, Thalita Gomes do Carmo

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RESEARCH

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Características epidemiológicas das puérperas internadas em maternidade pública de João Pessoa no ano de 2014

Epidemiological characteristics of puerperal women interned at public maternity hospital in João Pessoa in 2014

Caracteristicas epidemiologicas de las mujeres internadas en maternidad pública en João Pessoa en 2014

Vanessa de Souza Correio[1]; Elaine Antunes Cortez Correio[2]; Thalita Gomes do Carmo Correio[3]

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ABSTRACT

Objective: To know epidemiological characteristics of puerperal women of Frei Damião Maternity Hospital in the period from January to July in 2014. **Method:** Epidemiological, prospective and cross-sectional study. Used non-probability sampling technique with 400 mothers interviewed with help of a form. For analysis, algebraic tables, SPSS and chi-squared test were used. **Results:** High prevalence of adolescents aged between 15 and 17 years old, born and coming from urban areas, with no kinship to the newborn's father, with no history of abortions, low level of education, menarche at 12 years old, first sexual intercourse by the age of 16, and the newborn's father with an average age of 27. **Conclusion:** From these results, we can understand the profile of pregnant women at Frei Damião Maternity Hospital. It can help improve services, providing a care focused on adolescents needs, and preventing pregnancy on that age.

Descriptors: Reproductive health, Pregnancy in adolescence, Epidemiology.

[1] Post Graduated in Labor Nursing from UFF. Post Graduated in Infection Control in Health Care from UFF.

[2] PhD in Nursing from UFRJ. Adjunct Professor at the Federal University of Fluminense (UFF), Department of Maternal-Infant and Psychiatric (MEP).

[3] Federal University of Rio de Janeiro - Macaé. Nucleus of Surgical Medical Clinic.

RESUMO

Objetivo: Conhecer características epidemiológicas das puérperas da Maternidade Frei Damião, atendidas entre janeiro e julho de 2014. **Métodos:** Estudo epidemiológico, transversal e prospectivo. Amostra não probabilística por conveniência composta por 400 puérperas entrevistadas por meio de um questionário. Os dados foram analisados por tabelas algébricas, SPSS e Teste Qui-Quadrado. **Resultados:** Encontramos maior prevalência de adolescentes entre 15 e 17 anos, nascidas e procedentes de zona urbana, sem parentesco com o pai do RN, sem abortamentos prévios, com baixo nível de escolaridade, com menarca por volta de 12 anos, com sexarca por volta de 16 anos e pai do RN com média de 27 anos. **Conclusão:** A partir desses resultados, conhecemos melhor o perfil dessas mulheres, podendo ajudar na melhoria do atendimento, com maior foco nas necessidades dessas adolescentes, e prevenção de gravidez na adolescência. **Descritores:** Saúde reprodutiva, Gravidez na adolescência, Epidemiologia.

RESUMEN

Objetivo: Conocer características epidemiológicas de las madres en maternidad Frei Damião, visto entre enero y julio de 2014. **Método:** Estudio epidemiológico, prospectivo, de corte transversal. La muestra no probabilística de conveniencia, consta de 400 madres, entrevistado com questionario. Los datos fueron analizados con mesas algebraicas, SPSS y Chi-Cuadrado. **Resultados:** Mayor prevalencia de adolescentes entre 15 y 17 años, nacido y procedentes de zonas urbanas, sin relación con el padre del recién nacido, sin abortos anteriores, bajo nivel de educación, la menarquia en torno al 12 años, la primera relación sexual alrededor de 16 años y el padre del recién nacido con un promedio de 27 años. **Conclusión:** A partir de estos resultados, sabemos el perfil de estas mujeres. Esto puede ayudar a mejorar el servicio, con mayor énfasis en las necesidades de estos adolescentes y la prevención del embarazo en la adolescencia.

Descriptores: Salude reproductiva, Embarazo en la adolescencia, Epidemiología.

INTRODUCTION

Adolescence is the age between 10 and 19 years old, when there is a rapid growth, emergence of secondary sexual characteristics, sexuality awareness and the structuring of the personality. Pregnancy at this age is considered a public health problem in many countries as it can lead to obstetric complications and biopsychosocial problems, with consequences for the mother and the newborn.[1]

Teenage pregnancy is related to the first sexual intercourse increasingly earlier (in 1997, the average age of first intercourse was 16 years old for boys and 19 for girls, while in 2001 it fell to 14 and 15 respectively), lack of information on appropriate contraceptive methods, family maternal history of teenage pregnancy, difficulty of access to family planning program, low education, and sense of typical invulnerability of adolescence.[2-3] A survey of teenagers in a maternity of Rio de Janeiro noted that, in the absence of plans for the future, a family becomes a priority for adolescents.[4]

In Brazil, the National Demographic and Health Survey (PNDS) conducted in 2006 found the rejuvenation of the reproductive process against the global trend.[5] Pregnancies between 15 and 19 years old now represent 23% of the total in 2006 to 17% in 1996. In addition, 16.2% of adolescents (between 15 and 19 years old) were already mothers, and among these, 13.5% had two or more children.

Another problem is the recurrence of pregnancies in adolescence. In research conducted at the University of Colorado, it was observed that 14% of teenage mothers became pregnant again in the following of her first calving and 35% became pregnant within two years after the first calving.[6] A survey conducted in maternity hospitals in Rio de Janeiro found that 31.4% of mothers were at least in their second pregnancy.[7]

Teenage pregnancy is related to multiple biopsychosocial problems and obstetric complications: family and friends rejection, insecurity, depression, conflicts with the partner, drop out of school, financial difficulties, higher incidence of maternal anemia, hypertensive disorders of pregnancy, disproportion cephalopelvic, placenta praevia, lesions in the birth canal and breastfeeding problems.[8] A US study in 1998 found that only 53% of adolescents who become pregnant complete high school, against 95% who do not get pregnant.[9]

Another worrying situation related to teenage pregnancy is the high abortion rate. Among adolescents less than 15 years old, it is estimated that for every 100 children born, 133.6 embryos were aborted. Among 15 and 19 years old, the number of abortions falls to 67.3.[10] These numbers are important to analyze the number of cases where pregnancy is not desired. Moreover, abortion is a public health problem, being more common among people of higher income (due to better prospects). Complications are more common among the low income population, because the procedures are performed in the worst conditions.

Care should be taken to not stigmatize teen pregnancy as unwelcome, because there are a significant number of planned or well received pregnancies, especially when the child's father is the first partner of the pregnant and/or the couple lives together.[11]

In the late pregnancy (over 35 years), there is often emotional maturity, financial stability and stable marital relations, so these women can usually plan the pregnancy, involve the partner in the process and receive family support.[12] However, it can also occur unwanted pregnancies linked to pain, fear of death and insecurity.

In 2006, the National Demographic and Health Survey (PNDS)[5] found that the fertility of women over 35 years old represented 11% of the total, while in 1996 this rate was 13%. Late pregnancies are closely related to miscarriages, stillbirths, low Apgar score, hypertension, abnormal presentation, diagnosis of intrapartum fetal distress, puerperal hemorrhage, weight changes, and malformations.[13-4]

It is also observed that pregnant women over 35 years old undergo more cesareans than normal childbirths and have a higher risk of having premature babies. This is because they are more susceptible to complications during pregnancy, which may require the termination of pregnancy before fetal maturation. Maternal mortality is also higher in

these pregnant women, resulting mainly from postpartum hemorrhage, preeclampsia, placenta praevia, pulmonary embolism, and amniotic fluid embolism. Despite these complications, prenatal good and adequate assistance during childbirth can match the maternal and fetal prognosis of late pregnancies and young pregnancies.[15]

In the city of João Pessoa there is a shortage of epidemiological data on pregnant women enrolled and monitored in public health services in primary care, which hampers the planning of actions to the problems of the age group most commonly treated and monitored in health services. These research aims to try to solve this problem by answering the following question: "What is the most prevalent maternal age of pregnant women addressed and accompanied in the public services of João Pessoa city in the year of 2014?".

The knowledge of the reproduction's age group and the identification of the adverse effects of pregnancy in this age group are very important to the city of João Pessoa. Thus, it can direct the actions of public health and reduce the biopsychosocial disorders related to many of these pregnancies.

The importance of the Project is due to the impact generated by the epidemiological knowledge of the João Pessoa's population of pregnant women. It will provide important data on the network and contribute to the planning of actions to facilitate the promotion of health and prevention of some complications associated with pregnancies in a certain age group. With data in hand, the measures can be directed to be more effective and to provide for the lack of adherence of patients to the proposed plan.

The Project objectives are:

• To establish the main epidemiological characteristics of the mothers attended in public maternity hospitals in João Pessoa/PB;

• To observe the age distribution of the pregnant women attended in João Pessoa/PB maternity hospitals in 2014;

• To compare the data obtained with the one from the literature; and

• Forward the results to health managers in order to support public policies aimed at preventing teenage pregnancy.

METHODS

The study is a cross perspective, epidemic kind. The data collection was done between January and July 2014 in the Frei Damião Maternity, in the city of João Pessoa. A sample of 400 mothers was selected, formed by the ones who signed the Free and Informed Consent Form, and answered our form. The exclusion criteria was the patient who refuses to participate.

The ethical position of the researchers regarding the development of the research process was guided by the ethical recommendations contained in the regulatory guidelines and standards for research involving human subjects, set out in Resolution No. 196/96 of the National Health Council, in force in the country, especially with regard to the consent of the participant, as well as guaranteeing their anonymity and the confidentiality of sensitive data.

The variables of the survey are: pregnant woman's age at the time of the interview; pregnant woman's age at first pregnancy; age of the NB's father; schooling level of pregnant women; date and place of birth; place of origin; whether or not there is a relationship degree between the mother and the father of the newborn; occurrence of previous abortion; age of menarche; age of first sexual intercourse.

The descriptive analysis of data was performed as presented in the Algebraic Tables (Tables 1-7).

For statistical inference Statistical Package for Social Sciences (SPSS) version 19.0 to Windows will be used for data integration, processing and analysis.

Epidemiological characteristics of postpartum women in the public maternity of João Pessoa/PB

Form

Name:
Date of Birth:
Place of Birth: Rural Area ( ) Urban Area ( )
Origin: Rural Area ( ) Urban Area ( )
Menarche:
Age at first pregnancy:
Age at the beginning of sexual activity:
Age of father of the NB:
kinship to the newborn's father? None ( ) Cousin ( )
Other ( )
Any abortion? If so, how many?
Education
Illiterate: ( )
Elementary School
Completed: ( ) Uncompleted: ( )
High School
Completed: ( ) Uncompleted: ( )
College Education
Completed: ( ) Uncompleted: ( )

Filling date:

RESULTS

The average age of mothers admitted in the Frei Damião Maternity at the beginning of the first pregnancy was 18.38 years old. There is no mother under 12 years old found. While 9.75% were between 12 and 14 years old, 34% were between 15 and 17 years old, 23.25% were between 18 and 20 years old, and 33% were more than 20 years old. The most frequent age group was 15-17 years old.

Table 1 – Distribution of mothers by age of onset of first pregnancy site characteristics of birthplace (rural or urban) and origin (rural or urban). João Pessoa, 2014

Age (in years) at the beginning of the 1st pregnancy	Site characteristics of birth local		Origin	
	Rural	Urban	Rural	Urban
Below 12	0	0	0	0
12 – 14	5	34	9	30
15 – 17	13	123	25	111
18 – 20	11	82	13	80
Above de 20	4	128	11	121
Total	**33**	**367**	**58**	**342**

According to Table 1, it shows that 8.25% of mothers were born in rural areas, while 91.75% were born in urban areas. The average age of women at first pregnancy born in rural areas was 17.27 years. In contrast, average age at first pregnancy of women born in urban areas was 18.48 years.

Among mothers from the countryside, the most prevalent age group was between 15 and 17 years old, which corresponds to 43.1% of postpartum women. In addition, the frequency of pregnancies over 20 years was much lower, corresponding to 18.96% of mothers in rural area.

Among the mothers from urban areas, the highest frequency was the age group above 20 years old, which corresponds to 35.38% of postpartum women. However, the age group of 15 to 17 years old accounted for 32.45%, which is very close to the age group above 20 years old.

In our study, 85.5% of mothers were from urban areas.

The chi-square test for age at first pregnancy and the relationship to the newborns' father obtained a p-value of 0.727, which is greater than the significance level of 5%. Thus, we concluded that there was no difference between the relationship of puerperal with the father of the newborn, in relation to age. Regardless of age, the degree of relationship always remained the same.

In our study, only 10 women (2.5%) were cousins of the newborn's father, while 97.5% denied kinship.

We observed that 78.25% of postpartum women denied abortions, while 17.25% reported one abortion and 4.5% reported 2 to 4 abortions. Thus, we obtained an average number of abortions equal to 0.3 per puerperal. Applying the chi-square, we find a p-value of 0.298, which is greater than the significance level. Thus, we observed that these abortions variable was not significant, that is, there is no influence of the number of abortions and age.

Table 2 – Distribution of mothers by age of onset of first pregnancy and education level. João Pessoa, 2014

Age (in years) at the beginning of the 1st pregnancy	Education Level*						
	0	1	2	3	4	5	6
Below de 12	0	0	0	0	0	0	0
12 – 14	1	29	6	2	2	0	0
15 – 17	2	68	23	28	13	0	1
18 – 20	2	28	14	16	26	6	1
Above de 20	1	17	10	13	67	15	9
Total	**6**	**142**	**53**	**59**	**108**	**21**	**11**

* 0 = illiterate; 1 = Uncompleted elementary school; 2 = completed elementary school; 3 = uncompleted high school; 4 = completed high school; 5 = uncompleted college education; 6 = completed college education.

Table 2 shows that 1.5% of the mothers were illiterate, 35.5% had incomplete elementary school, 14.74% had not completed high school, 27% had completed high school, 5.25% had incomplete college education and 2.75% had completed college education.

In the distribution by age group, we find the following distribution: for the age group of 12 to 14 years old, the predominant education is incomplete elementary school (72.5%); for the age group between 15 and 17 years old also predominated incomplete elementary school (50%); for the age group between 18 and 0 predominated incomplete elementary school (30%), but completed high school was very close (27%); finally, for the age group above 20 years old, completed high school predominated (50%).

Table 3 – Distribution of mothers by the age of onset of first pregnancy and age of menarche. João Pessoa, 2014

Age (in years) at the beginning of the 1st pregnancy	Age of menarche (in years)			
	Below 10	10 – 12	13 – 15	Above 15
Below de 12	0	0	0	0
12 – 14	1	31	7	0
15 – 17	3	81	47	1
18 – 20	1	44	37	3
Above de 20	2	57	60	7
Total	**7**	**213**	**151**	**11**

On Table 3, we note that 18 mothers were unable to provide the age of menarche, then we consider n = 382. From these 383 mothers, 1.83% had the menarche before age 10; 55.75% had the menarche between 10 and 12 years old; 39.52% had the menarche between 13 and 15 years old; and 2.87% had the menarche over 15 years old. Thus, the average age of menarche was 12.29 years old.

Table 4 – Distribution of mothers by the age of onset of first pregnancy and age of first sexual intercourse. João Pessoa, 2014

Age (in years) at the beginning of the 1st pregnancy	Age of first sexual intercourse (in years)				
	Below 10	10 – 13	14 – 17	18 – 21	Above 21
Below de 12	0	0	0	0	0
12 – 14	0	26	12	0	0
15 – 17	1	23	110	0	0
18 – 20	0	9	53	22	0
Above de 20	0	5	30	68	28
Total	**1**	**63**	**205**	**90**	**28**

In Table 4, we found that 13 mothers were unable to answer the age of first sexual intercourse. Thus, from the 387 mothers who responded 0.25% had the first sexual intercourse under 10 years old; 16.2% between 10 and 13 years old; 52.97% between 14 and 17 years old; 23.25% between 18 and 21 years old; and 7.23% over 21 years old. The average age of first sexual intercourse was 16.44 years old, two years before the average age at onset of first pregnancy (18.38 years old).

Table 5 – Distribution of mothers by age of onset of first pregnancy and newborn's father's age. João Pessoa, 2014

Age (in years) at the beginning of the 1st pregnancy	Newborn's father's age (in years)						
	< 15	15 – 17	18 – 20	21 – 30	31 – 40	– 50	> 50
Below de 12	0	0	0	0	0	0	0
12 – 14	1	2	14	17	5	0	0
15 – 17	1	15	29	52	22	6	4
18 – 20	0	1	19	49	14	4	0
Above de 20	0	4	5	59	49	11	1
Total	**2**	**22**	**67**	**174**	**90**	**21**	**5**

In Table 5, we observe that 19 mothers were unable to answer the age of the newborn's father. Thus, of the 381 women who responded, 0.52% of the fathers were less than 15 years old; 5.77% were between 15 and 17 years old; 17.58% were between 18 and 20 years old; 45.66% were between 21 and 30 years old; 23.6% were between 31 and 40 years old; 5.51% were between 41 and 50 years old; and 1.31% were over 50 years old. The average age of the fathers of NBs was 27.6 years old, which is almost ten years older than the average age of mothers at the beginning of the first pregnancy.

DISCUSSION

Our study found that the average age of early first pregnancy was 18.38 years old, which corroborates the study of Caires[19] in 2005 also in João Pessoa with pregnant women between 11 and 20 years old. He found an average age of 16.9 years old, and 25.1% of them were between 11 and 15 years, while 67.3% were between 15 and 18 years old. The Brazilian National Institute of Geography and Statistics in 2002 found that only 21.34% of pregnant women were under 20 years old. The Aquino-Cunha's study[17] held in 2002 in Rio Branco showed that 37% of pregnant women were under 20 years old, while 63% were above 19 years old, which makes an average age of 22.9 years old.

From these results, we can see that there are still many teenage mothers. However, in our study, the number of adolescents was even greater than that found in the literature. This is probably due to data collection in the Frei Damião Maternity. As teenage pregnancy demand a more careful monitoring, they are sent to referenced maternities more often than other pregnant women.

When we analyze the age of onset of first pregnancy, place of birth and place of origin, we observed that the mother's birth in a rural area increases precocity of pregnancies. This is mainly due to the persistence of traditional cultural pattern of early motherhood that is still strong in those areas, and the lack of perspective of many of these adolescents. We know that greater independence of women and the dedication to professional area are important factors that induce women to become pregnant later. In rural areas, these factors are less well understood, that is probably the reason why the frequency of women in rural areas who become pregnant for the first time after 20 years is so low.

In mothers from urban areas, we observed a significant share of the age group above 20 years old. This is probably due to the greater independence of urban women, higher socio-cultural level, greater access to information and better life prospects.

In our study, we observed a predominance (85%) of mothers from rural areas, which supports Aquino-Cunha's study conducted in Rio Branco in 2002.[17] He found that 71.5% of pregnant women were from the urban area. We can attribute our results to the existence of hospitals in cities such as Campina Grande, Patos, Sousa, Cajazeiras, where many pregnant women from the countryside are sent to.

Maddaleno,[10] in a study conducted in 1995, found that among adolescents younger than 15 years old, 133.6 embryos were aborted for every 100 children born. Among 15 and 19 years old, the number of abortions dropped to 67.3. In Aquino-Cunha's study[17] in 2002, 17.6% reported previous abortion and 82.4% denied. In our study, the lack of significance can be attributed to the small sample (400 mothers), to the taboo related to abortions (whether illegal or not) and to the low education level. In addition, early

abortion can be confused with menstruation itself, mainly by women with low levels of education.

In our study, we can observe that with the increasing age of first pregnancy, the level of education also increased, and these two variables influence (the low level of education is cause and consequence of teenage pregnancy as well). Women with higher levels of education tend to get pregnant later, they have greater knowledge about contraception methods and value more the profession, leaving the maternity for a later time. On the other hand, we also observed that women who become pregnant early tend to have a lower level of education, because school withdrawal is very related to teenage pregnancy.

The high prevalence of low education level is mainly due to the maternity profile (belonging to SUS, it serves mainly the population of low economic status) and low age of first pregnancy (average age of 18.38 years old).

In the study of Senesi[13] in 2004, the findings were similar to ours. He found that 63.7% of women had incomplete elementary school, while only 6.8 had third degree. Blum[9] in his study in 1988 in the US found that only 53% of teens who got pregnant completed high school, compared to 95% of those who did not get pregnant. Amorim,[18] in a study conducted in Campina Grande in 2008, found that only 22.6% of pregnant teenagers were attending school. Finally, Aquino-Cunha,[17] in a study conducted in 2002 found 10.7% of illiterate, 68.3% of women with first complete or incomplete grade and 21% with second or third degree.

In Costa's[21] study held in Para, the average age of menarche was 12.2 years old, which is similar to what we found in our study (12.29 years old). The literature shows that menarche has occurred at increasingly early ages in recent decades. This is an important risk factor for teenage pregnancy, as also provides a first sexual intercourse earlier.

The first sexual intercourse, which is increasingly early, is an important determinant of early age of onset of first pregnancy. In the literature, we also accompany the reduction of the age of first sexual intercourse range. Studies in 1998 showed that 56.5% of men and 41.6% of women between 16 and 19 were sexually active. In 2005, the values for the same age passed to 78.4% and 68.5% respectively. Amorim,[18] in a study conducted in Campina Grande in 2008, found that 47% of pregnant adolescents had begun their sexual life before age 15, compared to 16% of non-adolescents. In a Costa's[21] study, He found an average age of first sexual intercourse by age 16, as well as in our study (16.44 years old).

In a study by Abeche[11] involving 309 adolescents aged between 11 and 19 years, the partner's average age was four years higher than the age of the pregnant woman. In the present study, the father of the newborn was an average age above 10 years of the pregnant woman.

CONCLUSION

Through the reported results, we know the profile of pregnant women in the Frei Damião Maternity. For the purpose of this research, we will forward the results to health managers in order to contribute to improvements in care at the Maternity Frei Damião. Since the served age group is particularly formed for adolescents, it is important to provide a good psychosocial support during and after birth, besides doctors' awareness of the most common complications in pregnant adolescents. Knowing the profile of these adolescents who become pregnant is also important in preventing pregnancy in this age group, as well as preventing recurrences.

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Author responsible for correspondence:
Claudio Sérgio Medeiros Paiva Correio
Universidade Federal da Paraíba
Cidade Universitária, s/n - Castelo Branco
João Pessoa/PB
ZIP-code: 58051-900